

RADIOCHEMISTRY TECHNICIAN JOB PERFORMANCE MEASURE

TASK CODE: TRC-G04

TASK: Perform Elemental Separation for Fission Products

NAME: _____ **SSN:** _____

REFERENCES:

1. WP 12-RL1001, Sample Tracking and Custody
2. WP 12-RL1010, Sample Preparation
3. WP 12-RL1011, Elemental Separation - Fission Products
4. WP 12-RL1400, Radiochemistry Laboratory Waste Management
5. CF-4.10, Fission Product Samples

TERMINAL OBJECTIVE:

Given either a solid or liquid sample prepared per WP 12-RL1010, perform elemental separation for fission products per WP 12-RL1011.

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Improper analysis results
Loss of a sample

HAZARDS (PERSONNEL/EQUIPMENT STATUS):

None

PRE-REQUISITE TRAINING/ TASK COMPLETION:

1. CF 4.00 Series
2. TRC-G01, Prepare a Liquid Sample
3. TRC-G02, Prepare a Solid Sample
4. TRC-F05, Prepare a Sample Filtration Apparatus
5. Radiological Worker II
6. Hazardous Waste Worker

TOOLS/EQUIPMENT (MATERIALS REQUIRED):

- | | | | |
|----|-------------------|----|-----------------------|
| 1. | Prepared reagents | 4. | Various containers |
| 2. | PH meter/pH paper | 5. | Deionized water |
| 3. | Various tracers | 6. | Various Lab equipment |

Instructions to Trainee: You shall acquire the necessary references and equipment, and complete all required documentation. Knowledge requirements shall be completed with 80% or greater accuracy. Critical step performance shall be completed with 100% accuracy.

Instructions to JPM Evaluator: The trainee is to perform the terminal objective, without assistance, on the job site. Provide clarification of requirements if requested by the trainee. You are encouraged to ask relevant questions to verify trainee understanding. If the trainee fails this JPM, clearly document the reason for failure and forward to the trainee's manager. Successful completion of this JPM shall be recorded on the trainee's qualification card.

KNOWLEDGE REQUIREMENTS:

Reference	Knowledge Requirement	Pass/Fail
5	Define a fission product sample.	
3	State the required PPE while performing elemental separation for fission products.	
3	Discuss the various reagents required for elemental separation of fission products.	
3	Discuss the various carriers required for elemental separation of fission products.	
3	State the procedural precautions and limitations for elemental separation of fission products.	
1	Describe how the Radiochemist is notified which fission products fractions are desired for analysis.	
3,5	Discuss the purpose of the filtration apparatus in regards to performing elemental separation of fission products.	
3	Discuss the laboratory equipment required for elemental separation of fission products.	
3	State the labeling requirements for the various fission products fractions while being extracted.	
1,3	Discuss the requirements for tracking the number of aliquots.	
3	Discuss the documentation requirements during elemental separation of fission products	

2	Discuss the stage of the prepared sample prior to beginning elemental separation for fission products	
3	State the importance of recording the Yttrium Ingrowth start time.	
3	State the requirements for recording the “tare” weights	

PERFORMANCE REQUIREMENTS:

Reference	Performance Requirement	Pass/Fail
3	Don the appropriate PPE.#	
3	Add the appropriate carriers.#	
1,3	Track the sample aliquots as necessary.#	
3	Perform elemental separation for fission products.#	
3	Record the Yttrium Ingrowth start time.#	
3,4	Discard of waste products.#	
3	Label separated fission products fractions.#	
1	Document required information in the Radiochemistry Logbook.#	
1	Complete applicable sections of the Inter-department Tracking Form.#	

indicates a critical step

FINAL EVALUATION:

PASS

FAIL

COMMENTS:

EVALUATOR SIGNATURE: _____ **DATE:**_____

TRAINEE SIGNATURE: _____ **DATE:**_____

MANAGER SIGNATURE: _____ **DATE:**_____